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EXAMINER
CHANG, AUDREY Y

ART UNIT	PAPER NUMBER
2872	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/658,055	CURTIS ET AL.
	Examiner	**Art Unit**	
	Audrey Y. Chang	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 December 2006_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-21,23-25,27-43,45 and 47-60_ is/are pending in the application.

    4a) Of the above claim(s) _See Continuation Sheet_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4,7,8,10,11,15,16,23,24,28,30,35,42,43 and 53_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _1/25/2007_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Remark

- This Office Action is in response to applicant's amendment filed on December 20, 2006, which has been entered into the file.

- By this amendment, the applicant has amended claims 1, 24, 30 and 43. **The applicant is respectfully noted that the status indicator for claim 9 is wrong.** Claim 9 has been withdrawn from consideration due to its non-elected status. The applicant is respectfully requested to make proper correction in the next communication.

- Claims **5-6, 9, 12-14, 17-21, 25, 27, 29, 31-34, 36-39, 41, 45, 47-52 and 54-60 are** withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on **March 3, 2005**.

- Claims 1-4, 7-8, 10-11, 15-16, 23-24, 28, 30, 35, 40, 42-43 and 53 remain pending in this application.

- The rejections to claims under 35 USC 112, first paragraph, with regard to newly added matters as set forth in the previous Office Action are withdrawn in response to applicant's amendment.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.   **Claims 24, and 28 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the

specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most

nearly connected, to make and/or use the invention.

Claim 24 recites a "data mask" only that is not in combination with another recited element of

means is subjected to undue breadth rejection under 35 USC 112, first paragraph as a **single means**

claim. The claim seems to cover every conceivable structure for achieving the stated property while the

specification discloses at most only those known to the inventor.

The applicant is respectfully noted that claim 24 really only claims a "data mask". The

feature concerning "information layer" is just an abstract object. Information is not a real object

but an abstract object. The applicant is respectfully noted that "holographic medium" is not part

of this claim, rather an intended use phrase, since the "data mask" is not the holographic medium

and the "holographic medium" is not part of the data mask.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   **Claims 1, 3, 7, 10, 11, 23, 24, 30, and 35 are rejected under 35 U.S.C. 102(b) as being**

anticipated by the patent issued to Snyder et al (PN. 6,064,586).

Snyder et al teaches a method and a system for recording holograms in a holographic storage

medium that is comprised of the step of illuminating a *spatial light modulator* (66, Figure 6, and column

7, lines 37-54), serves as the *data mask,* with a light beam (60) to produce a *modulated* beam , the step of

propagating a reference beam (62) toward a holographic storage medium (70), and the step of recoding an

interference pattern between the modulated beam, (from the data mask), and the *reference* beam (62) in the *holographic storage medium*, (please see Figure 6) as the holograms. Snyder et al teaches that the spatial light modulator has *an information layer* that is divided up into a *plurality of data storage sectors (16) serving as the plurality of the data pages*, (please see Figure 1, and column 4), such that each data storage sectors comprises a plurality of data pixels, (12).

Claims 1, 24 and 30 have been amended to include the phrase "each data page comprises a plurality of data pixels and at least one feature for page-wise error correction upon readout". **Snyder** et al teaches that each data storage sector (16), serves as the plurality of data pages, comprises a plurality of data pixels or page pixels (12, please see column 4, lines 25-26). Snyder et al further teaches that error correction coding is added to the binary data bits of data pattern contained within the data storage sector, (please see column 5, lines 19-48).

With regard to claim 3, the information of the data sectors recorded in the holographic storage medium are spatially overlapped.

With regard to claim 7, the holographic recording medium is positioned at the positioned such that the modulated light is imaged by a lens (63) to the holographic recording medium.

With regard claims 10-11 and 23, the holographic recording medium (70) is a *rectangular* card and implicitly is a disc.

With regard to claim 24, the spatial light modulator (66) serves as the *data mask* with an information layer having a plurality of data pages wherein each data page comprises a plurality of *pixels*, (please see Figures 1-2 and column 4), as described above.

With regard to claim 30, **Snyder** et al teaches the holographic recording system having a *light source* (50, Figure 6) and a *spatial light modulator* (66) having a plurality of data pages serves as the data mask for relaying an information layer to a holographic recording medium.

With regard to claim 35, Snyder et al teaches that an optical element (63) is used to relay the image displayed on the data mask to the holographic storage medium.

This reference has therefore anticipated the claims.

5.   **Claims 1, 3, 7, 23, 24, 30, 35, 43 and 53, are rejected under 35 U.S.C. 102(b) as being anticipated by the patent issued to Blaum et al (PN. 5,510,912).**

Blaum et al teaches a method and apparatus for recoding hologram in a holographic storage medium wherein the method is comprised a step of preparing a reference beam (26, Figure 2) to a holographic recording medium (10), the step of illuminating a spatial light modulator (30), that serves as the data mask with a beam to produce a *modulated* beam or signal beam (28) to the holographic recording medium wherein the reference beam and the modulated beam interfere at the holographic recording medium and the interference pattern is recorded as the hologram. The data mask or the spatial light modulator comprises an information having a plurality of data pages.

Claims 1, 24, 30 and 43 have been amended to include the phrase "each data page comprises a plurality of data pixels and at least one feature for page-wise error correction upon readout". **Blaum** et al teaches that each data page comprises a plurality of data pixels or page pixels (data pixels are implicitly included in the spatial light modulator). Blaum et al further teaches that error correction coding is added to the binary data bits of data pattern contained within the data page, (please see the abstract).

With regard to claim 3, Blaum et al teaches that the hologram can be recorded in multiplexed fashion which means the holograms spatially overlapped.

With regard to claim 7, the holographic storage medium is positioned at a position wherein the modulated beam is imaged by a lens (32).

With regard to claim 11, the holographic storage medium implicitly is a disc.

With regard to claim 24, the spatial light modulator serves as the data mask.

With regard to claim 30, the hologram recording apparatus comprises a light source, (20, please

see Figure 2).

With regard to claim 35, Blaum et al teaches that the holographic storage medium can be moved

by reposition mechanism (50, Figure 2).

With regard to claim 43, Blaum et al teaches that the holographic storage medium can be moved

by the reposition mechanism such that each page of the multiple data pages can be recorded on the

holographic recording medium in parallel.

This reference has therefore anticipated the claims.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

7.   **Claims 2, 4, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the**

patent issued to Snyder et al.

The method and system for recording holograms in a holographic storage medium taught by

Snyder et al as described for claims 1 and 24 above has met all the limitations of the claims.

With regard to claim 2, this reference does not teach explicitly that the recorded data pages are

separated by 1 micron to 10 mm. However this feature is either inherently met by the disclosure of

Snyder et al or an obvious modification to one skilled in the art to design the recorded holograms be

arranged with a desired separation for the benefit of making recorded holograms not interfering with each

other.

With regard to claim 4, Snyder et al does not teach explicitly that the image of the information

layer is formed at a plane located outside of the holographic storage medium. However such modification

would have been obvious to one skilled in the art to make the data recorded in the storage medium not

interfering with each other.

With regard to claim 28, Snyder et al does not teach *explicitly* that the spatial light modulator

have a multiple information layers, however it is within general skill of worker in the art to provide

multiple information layers in the spatial light modulator to allow multiple information being recorded in

the storage medium.

8.   **Claims 1-4, 7, 10-11, 23-24, 28, 30 and 35 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over the patent issued to Guest et al in view of the patent issued to Snyder et al.

Claims 1, 24, and 30 have been significantly amended that necessitates the new grounds of

rejection.

Guest et al teaches a method and a system for recording holograms in a holographic storage

medium that is comprised of the step of illuminating a *page composer* (20, Figures 1-5, , and columns 4-

6), serves as the *data mask,* with a light beam (36) to produce a *modulated* beam , the step of propagating

a reference beam (38) toward a holographic storage medium (24), and the step of recoding an interference

pattern between the modulated beam, (from the data mask), and the *reference* beam (62) in the

holographic storage medium, (please see Figures 1-5) as the holograms. Guest et al teaches that the page

composer (20) has *an information layer* that is divided up into a *plurality of data arrays* (42a-42f, Figure

2) *serving as the plurality of the data pages*, (please see Figure 1, and column 4), such that each data

pages comprises a plurality of pixels, (46, please see column 4, line 43 to column 5 line 23).

Claims 1, 24 and 30 have been amended to include the phrase "each data page comprises a

plurality of data pixels and at least one feature for page-wise error correction upon readout". Guest et al

teaches that each data array comprises a plurality of data pixels but it does not teach explicitly that error correction coding is included. However it is pretty common in the art to add error correction coding in the data information to ensure the correctness of the retrieve data as explicitly taught by Snyder et al. **Snyder** et al teaches a holographic data storage that is comprised of a plurality of data storage sectors or data pages wherein error correction coding is added to the binary data bits of data pattern contained within the data storage sector, (please see column 5, lines 19-48) to ensure the correctness of the retrieved data. It would then have been obvious to one skilled in the art to modify the holographic recording of Guest et al to add error correction coding into the data information for the benefit of ensuring the correctness of the retrieved data.

With regard to claim 2, this reference does not teach explicitly that the recorded data pages are separated by 1 micron to 10 mm. However this feature is either inherently met by the disclosure of Guest et al or an obvious modification to one skilled in the art to design the recorded holograms be arranged with a desired separation for the benefit of making recorded holograms not interfering with each other.

With regard to claim 3, the information of the data pages recorded in the holographic storage medium are spatially overlapped.

With regard to claim 4, Guest et al does not teach explicitly that the image of the information layer is formed at a plane located outside of the holographic storage medium. However such modification would have been obvious to one skilled in the art to make the data recorded in the storage medium not interfering with each other.

With regard to claim 7, the holographic recording medium is positioned at the positioned such that the modulated light is imaged by a lens (22) to the holographic recording medium.

With regard claims 10-11 and 23, the holographic recording medium (24) is a *rectangular* card and implicitly is a disc.

With regard to claim 24, the page composer (20) serves as the *data mask* with an information

layer having a plurality of data pages (42a to 42f, Figure 2) wherein each data page comprises a plurality

of *pixels*, (46, please see Figure 2), as described above.

With regard to claim 28, Guest et al does not teach *explicitly* that the spatial light modulator have

a multiple information layers, however it is within general skill of worker in the art to provide multiple

information layers in the spatial light modulator to allow multiple information being recorded in the

storage medium.

With regard to claim 30, **Guest** et al teaches the holographic recording system having a *light*

source (10, Figure 1) and a *page composer (20)* having a plurality of data pages serves as the data mask

for relaying an information layer to a holographic recording medium.

With regard to claim 35, Guest et al teaches that an optical element (22) is used to relay the image

displayed on the data mask to the holographic storage medium.

9.   **Claims 1, 8, 15, 16, 30, 40, 42, 43, and 53 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over the patent issued to Hart (PN.5,592,313) in view of the patent issued to Schehrer

et al (PN. 5,258,860) and Snyder et al.

Claims 1, 30 and 43 have been significantly amended that necessitates the new grounds of

rejection.

Hart teaches a method and system for recording hologram on a holographic storage medium that

is comprised of the *step of illuminating* a *master hologram* (H1, Figure 9), serves as the *holographic*

master data mask to reconstruct a stored information layer onto a *holographic storage medium*, (H2) with

an *object beam* (806), therefore creating modulated beam (806), wherein the master hologram (H1)

includes a *holographic storage material*. The method further comprises the step of propagating a

reference beam (852) to the holographic storage medium (H2) to record an interference pattern between

the reference beam and the modulated beam, which therefore record a hologram containing the

information layer, (please see Figure 9 and column 24). With regard to claim 53, a holographic recorded

medium (H2) is created by the recording method. With regard to claims 40 and 42, the mater hologram

serves as the data mask.

This reference has met all the limitations of the claims. With regard to the features that the

holographic master data mask comprises a layer of data divided into a multiple data pages such that each

of the data page comprises a *plurality of pixels, as recited* **claims 1, 30 and 43,** it is implicitly true that

the division of a layer of data into a plurality of pages can be arbitrary done by simply dividing the

holographic master data mask into multiple data sections each representing a data page as desired. This

reference however does not teach explicitly that the holographic master data mask comprises *a plurality*

of pixels. **Schehrer** et al in the same field of endeavor teaches that an optically addressed spatial light

modulator (OASLM) which implicitly includes a *plurality of pixels* can be used to record holographic

data, (please see column 5, lines 34-37). It would then have been obvious to one skilled in the art to apply

the teachings of Scherer et al to use an optically addressed spatial modulator as the means for storing the

master holographic information layer and serves as the holographic master data mask for the benefit of

providing the data intended to be recorded with better accuracy and clarity, (pixels nature of the display

gives the benefit of clarity and good resolution) and providing the means for easily changing and

providing different layers of information intended to be recorded.

Claims 1, 24 and 30 have been amended to include the phrase "each data page comprises a

plurality of data pixels and at least one feature for page-wise error correction upon readout". **Schehrer** et

al teaches that each data array comprises a plurality of data pixels but it does not teach explicitly that

error correction coding is included. However it is pretty common in the art to add error correction coding

in the data information to ensure the correctness of the retrieve data as explicitly taught by **Snyder** et al.

Snyder et al teaches a holographic data storage that is comprised of a plurality of data storage sectors or

data pages wherein error correction coding is added to the binary data bits of data pattern contained

within the data storage sector, (please see column 5, lines 19-48) to ensure the correctness of the retrieved

data. It would then have been obvious to one skilled in the art to modify the holographic recording of

Hart in view of Schehrer et al to add error correction coding into the data information for the benefit of

ensuring the correctness of the retrieved data.

20.   **Claims 2, 4, 10, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the**

patent issued to Blaum et al.

The method and system for recording holograms in a holographic storage medium taught by

Blaum et al as described for claims 1 and 24 above has met all the limitations of the claims.

With regard to claim 2, this reference does not teach explicitly that the recorded data pages are

separated by 1 micron to 10 mm. However this feature is either inherently met by the disclosure of

Snyder et al or an obvious modification to one skilled in the art to design the recorded holograms be

arranged with a desired separation for the benefit of making recorded holograms not interfering with each

other.

With regard to claim 4, Blaum et al does not teach explicitly that the image of the information

layer is formed at a plane located outside of the holographic storage medium. However such modification

would have been obvious to one skilled in the art to make the data recorded in the storage medium not

interfering with each other.

With regard to claim 10, Blaum et al does not teach explicitly that the holographic recording

medium is a rectangular card. However using rectangular card as the holographic recording medium is

extremely well known in the art, it would have been obvious to one skilled in the art to make the

hologram recorded in a card for the benefit of utilizing the hologram recording method to record

hologram in card type document such as credit card for variety of purposes.

With regard to claim 28, Blaum et al does not teach *explicitly* that the spatial light modulator have a multiple information layers, however it is within general skill of worker in the art to provide multiple information layers in the spatial light modulator to allow multiple information being recorded in the storage medium.

10.   **Claims 1, 4, 10, 11, 23, 24, 30, 43 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Edwards (PN. 6,538,776) in view of the patent issued to Snyder et al.**

Claims 1, 24, 30 and 43 have been significantly amended that necessitates the new grounds of rejection.

Edwards teaches a *holographic storage system* and *method* wherein the method comprises the step of *propagating a reference beam* (please see Figure 1, Reference path), from *a light source* (10), to a *holographic storage medium* (25) and the step of *illuminating a spatial light modulator* (SLM 20) serves as the *data mask* with a light beam to produce a *modulated beam* wherein the modulated beam and reference beam incident and interfere with each other in the holographic storage medium and the interference pattern is recorded in the holographic storage medium as a hologram. The spatial light modulator serves as the data mask comprises an *information layer* having multiple data pages (i.e. the information layer can be arbitrarily divided up into a multiple sections or pages), such that an image of the information layer is formed having a size substantially equal to an incident surface or the intercepting surface of the modulated beam on the holographic storage medium, (please see Figures 1-2, column 3, line 24 to column 4, line 29).

Claims 1, 24, 30 and 43 have been amended to include the phrase "each data page comprises a plurality of data pixels and at least one feature for page-wise error correction upon readout". The spatial light modulator implicitly comprises a plurality of data pixels. Edward et al however does not teach

explicitly that error correction coding is included. But it is pretty common in the art to add error

correction coding in the data information to ensure the correctness of the retrieve data as explicitly taught

by Snyder et al. **Snyder** et al teaches a holographic data storage that is comprised of a plurality of data

storage sectors or data pages wherein error correction coding is added to the binary data bits of data

pattern contained within the data storage sector, (please see column 5, lines 19-48) to ensure the

correctness of the retrieved data. It would then have been obvious to one skilled in the art to modify the

holographic recording of Edward et al to add error correction coding into the data information for the

benefit of ensuring the correctness of the retrieved data.

With regard to claim 4, Edwards teaches explicitly that the image of the information layer is

formed at a plane located outside the holographic storage medium, (please see the Fourier transform plane

(24B) locating outside the storage medium (25, Figure 1).

With regard to claim 4, Edwards teaches explicitly that the image of the information layer is formed at a

plane located outside the holographic storage medium, (please see the Fourier transform plane (24B)

locating outside the storage medium (25, Figure 1).

With regard to claims 10 and 11, Edwards teaches that the holographic storage medium can be a

card or disc, (please see column3, lines61-64).

With regard to claim 43, the information layer can be arbitrarily divided up into sections of the

data and be identifies as multiple pages, (please see Figure 2 for the information layer), and the multiple

pages are therefore recorded in parallel on the storage medium.

Response to Arguments

21: Applicant's arguments with respect to **amended claims** have been considered but are moot in

view of the new ground(s) of rejection. Applicant's arguments are mainly drawn to newly amended

features. They have been fully considered and addressed in the paragraphs above.

Conclusion

11.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office

action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is

reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing

date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory action

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX
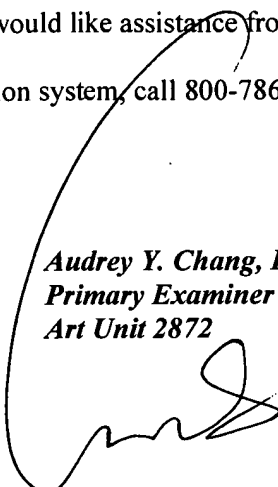
MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally

be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where

this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained

from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer

Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR

CANADA) or 571-272-1000.

Audrey Y. Chang, Ph.D.
Primary Examiner
Art Unit 2872

A. Chang, Ph.D.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 5,6,9,12-14,17-21,25,27,29,31-34,36-39,41,45,47-52 and 54-60.